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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,524	03/01/2004	Douglas P. Gethmann	06005/39970	2733

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EXAMINER	
GARCIA, ERNESTO	
ART UNIT	**PAPER NUMBER**
3679	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/790,524	GETHMANN, DOUGLAS P.	
	Examiner	Art Unit	
	Ernesto Garcia	3679	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16,18-21 and 23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16,18-21 and 23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 21, 2006 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "an outer engagement surface engaging the threaded aperture of the female member" (claim 1, lines 11-13) and "a substantially smooth outer surface contacting the threaded aperture of the second connection member" (claim 9, lines 9-11) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Objections

Claims 1 and 9 are objected to because of the following informalities:

regarding claim 1, --the-- needs to be inserted after "adjacent" in line 11; and,

regarding claim 9, "male threads" in line 2 should be --a male thread--, "female threads" in line 3 should be --a female thread--, "threads" in lines 13, 14, and 17 should be --thread--. Appropriate correction is required. For purposes of examining the instant invention, the examiner has assumed these corrections have been made.

Claim Rejections - 35 USC § 112

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, there is an inconsistency between the language in the preamble and a certain portion in the body of the claim, thereby making the scope of the claims unclear. The preamble clearly indicated that the locking mechanism is "for securing a female member to a male member". However, the body of the claim positively recites "the female member", e.g., "the first axial end positioned in the threaded aperture" (line 7) and "an outer engagement surface engaging the threaded

aperture of the female member" (lines 11-13), which indicates that the claims are being drawn to a combination of the "locking mechanism" and "the female member". Accordingly, is the combination or subcombination being claimed? Appropriate correction, clarification, or both is required. For purposes of this Office action, the examiner has considered the locking mechanism alone.

Regarding claim 9, how does the smooth outer engagement surface in line 10 remain smooth during contact with the threaded aperture? It appears the smooth engagement surface deforms and thus the outer engagement surface does not remain smooth.

Regarding claims 10-16, the claims depend from claim 9 and therefore are indefinite.

Claim Rejections - 35 USC § 102

Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Evans, 2,844,830

Regarding claim 1, Evans discloses, in Figure 1, a locking mechanism comprising a body **1** and a wedge **2**. The body **1** extends along an axis **A9** (see marked-up attachment provided in the Office action mailed June 24, 2005) and has an

outer side surface **A10** sized. The body **1** defines a first axial end **A11** and a second axial end **A12**. The wedge **2** projects from the first axial end **A11** of the body **1**. The wedge **2** has an inner engagement surface **A16** and an outer engagement surface **A17**. The wedge **2** is sufficiently pliant.

Applicant should note that when a male member is positioned adjacent the first axial end of the body **1**, the inner engagement surface **A16** can engage an insertion end of the male member, and the outer engagement surface **A17** can be adapted to engage the threaded aperture of a female member. Further, the first axial end **A11** can be positioned in the threaded aperture to face out of the threaded aperture.

Regarding claim 2, the wedge **2** forms a continuous rim extending around the first axial end. The rim **2** has a triangular cross-section.

Regarding claim 3, a central portion of the first axial end **A11** defines a cavity **4** that forms the inner engagement surface **A16**.

Regarding claim 4, the cavity **4** has a cone shape.

Regarding claim 5, the cone shape has a vertex angle of approximately 120 degrees.

Regarding claim 6, the wedge **2** is able to deform radially outward as an insertion force is applied to a male member.

Regarding claim 7, the male member, the female member, and the body are formed of a similar material (note that the cross hatching is metal for all components).

Claim Rejections - 35 USC § 103

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Evans, 2,844,830.

Regarding claim 8, Evans, as discussed above, fails to disclose the material formed of a 300 series stainless steel. Applicant is reminded that, within the general skill of worker in the art, selecting a known material on the basis of its suitability for the intended use is a matter of obvious design choice. Further, it is well known that 300 series stainless steel is a well known material that prevents rusting. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made select a 300 series stainless steel for the material to prevent rusting of the components. *In re Leshin*, 125 USPQ 416.

Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martus, 1,753,154, in view of Boyle et al. 3,854,374.

Regarding claim 9, Martus discloses, in Figure 1, a locking assembly comprising a first connection member **A1** (see marked-up attachment provided in the last Office action), a second connection member **A4**, and a locking mechanism **10**. The first connection member **A1** defines an insertion end **A2** formed with male thread **A3**. The second connection member **A4** defines an aperture **A5** formed with female thread **A6** complementary to the male thread **A3**. The locking mechanism comprises a body **A8** and a wedge **A13**. The body **A8** extends along an axis **A9** and has an outer side surface **A10** sized. The body **A8** defines a first axial end **A11** and a second axial end **A12**. The wedge **A13** projects from the first axial end **A11** of the body **A8**. The wedge **A13** has an inner engagement surface **15** and a substantially smooth outer engagement surface **A17**. The inner engagement surface **15** engages the insertion end of the first connection member. The wedge **A13** is sufficiently pliant. The substantially smooth outer engagement surface **A17** contacts the threaded aperture.

However, Martus fails to disclose the wedge being continuous due to the slots being present. Boyle et al. discuss, as prior art, that a locking mechanism has been made without slots to retain an extended shape as opposed to having slots (col. 6, lines 28-33 and 35-36). Therefore, as taught by Boyle et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the wedge of Martus continuous due to no slots to retain the locking mechanism in an extended shape.

Regarding claim 10, the first connection member **A1** comprises an extension stem, and the second connection member **A4** comprises a valve actuator rod.

Regarding claim 11, the wedge **A13** forms a continuous rim extending around the first axial end **A11** of the body **A8**.

Regarding claim 12, a central portion of the first axial end **A11** defines a cavity **15** that forms the inner engagement surface **15**.

Regarding claim 13, the cavity **15** has a cone shape.

Regarding claim 14, the cone shape has a vertex angle of approximately 120 degrees.

Regarding claim 15, the locking mechanism **10**, the first connection member **A1**, and the second connection member **A4** are formed of materials having similar hardness and strength.

Regarding claim 16, Martus, as discussed above, fails to disclose the material formed of a 300 series stainless steel. Applicant is reminded that, within the general skill of a worker in the art, selecting a known material on the basis of its suitability for the

intended use is a matter of obvious design choice. Further, it is well known that 300 series stainless steel is a well known material that prevents rusting. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made select a 300 series stainless steel for the material to prevent rusting of the components. *In re Leshin*, 125 USPQ 416.

Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stitt, 3,352,343, in view of Boyle et al., 3,854,374, and Staubli, 5,078,294.

Regarding claim 23, Stitt discloses, in Figure 2, a locking mechanism comprising a valve actuator rod **1**, an extension stem **6**, and a generally cylindrical body **2**. The rod **1** has a threaded aperture **5**. The stem **6** has a tip **8**. The body **2** has a second end **16** and a first end (near **8**). The second end **16** faces into the aperture and the first end faces out of the aperture **5**. The first end of the body **2** forms a deflectable wedge with a triangular cross-section. The wedge has a generally conical inner engagement surface **12**.

However, Stitt fails to disclose the deflectable wedge being a continuous circumferential due to the slots being present, and the wedge having a non-thread outer engagement surface. Boyle et al. discuss, as prior art, that a locking mechanism has been made without slots to retain an extended shape as opposed to having slots (col. 6, lines 28-33 and 35-36). Therefore, as taught by Boyle et al., it would have been

obvious to one of ordinary skill in the art at the time the invention was made to make the deflectable wedge of Stitt continuous due to no slots to retain the locking mechanism in an extended shape.

Further, Staubli teaches, on the right side of Figure 4, a deflectable wedge 11 having a non-threaded outer engagement surface to engage a profiled parts and/or roughened part, preferably designed as a thread 35 (col. 7, lines 8-16). Therefore, as taught by Staubli, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the deflectable wedge of Stitt have a non-threaded outer engagement surface to engage the thread already formed in the threaded aperture to permit a dual locking system.

Regarding claim 18, the wedge forms a continuous rim extending around the first axial end.

Regarding claim 19, a central portion of the first axial end defines a cavity that forms the inner engagement surface **12**.

Regarding claim 20, the cavity has a cone shape.

Regarding claim 21, the cone shape has a vertex angle of approximately 120 degrees.

Regarding claim 22, the wedge **2** is able to deform radially outward as an insertion force is applied to a male member.

Response to Arguments

Applicant's arguments filed December 12, 2006 have been fully considered but they are not persuasive.

In particular, note the 35 U.S.C 112(2nd) rejections. Further, applicant's arguments with respect to claim 23 have been considered but are moot in view of the new grounds of rejections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 571-282-7083. The examiner can normally be reached from 9:30-5:30. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel P. Stodola can be reached at 571-272-7087.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

E.G.

January 6, 2007

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